Claims

What is claimed is:

1. A method for allocating resources in a circuit switched data network, comprising:

receiving a request for a resource from a device coupled to the circuit switched data network;

granting the resource to the requesting device if the resource is available, otherwise:

examining a first factor corresponding to an instantaneous quantity of data to be transmitted by the requesting device;

examining a second factor corresponding to a rate of change in the instantaneous quantity of data to be transmitted by the requesting device;

examining a third factor corresponding to a time of utilization of the resource by the requesting device;

granting the resource to the requesting device based on the examination of the first, second and third factors.

2. The method of claim 1, wherein the resource comprises a communications channel in the circuit switched network.

3. The method of claim 2, wherein the communications channel in the circuit switched network comprises a radio frequency communications channel in the circuit switched network.

4. The method of claim 1, wherein receiving a request for a resource from a device coupled to the circuit switched data network, comprises receiving a request for a resource from a device coupled to the circuit switched data network when a threshold for requesting the resource has been achieved.

5. The method of claim 4, wherein the threshold comprises a depth of a data transmission queue for the device.

6. The method of claim 5, wherein the depth of the data transmission queue for the device comprises a moving average of the depth of the data transmission queue for the device.

7. The method of claim 4, wherein the threshold comprises a rate of change in a depth of a data transmission queue for the device.

8. The method of claim 7, wherein the threshold comprises a moving average of the rate of change in the depth of the data transmission queue for the device.

9.The method of claim 4,wherein the threshold comprises a time of utilization of the resource by the device.

10. The method of claim 9, wherein the threshold comprises a moving average of the time of utilization of the resource by the device.

11. The method of claim 1, wherein receiving a request for a resource from a device coupled to the circuit switched data network when a threshold for requesting the resource has been achieved, comprises adjusting the threshold for requesting the resource based on a number of resources already allocated to the device, and receiving the request for the resource from the device coupled to the circuit switched data network when the threshold for requesting the resource has been achieved.

12. The method of claim 1, wherein granting the resource to the requesting device based on the examination of the first, second and third factors further comprises first deallocating the resource from a second device.

13. An article of manufacture, comprising:

a machine accessible medium, the machine accessible medium providing instructions, that when executed by a machine, cause the machine to allocate resources in a circuit switched data network, comprising:

receiving a request for a resource from a device coupled to the circuit switched data network;

granting the resource to the requesting device if the resource is available, otherwise:

examining a first factor corresponding to an instantaneous quantity of data to be transmitted by the requesting device;

examining second factor corresponding to a rate of change in the instantaneous quantity of data to be transmitted by the requesting device;

examining a third factor corresponding to a time of utilization of the resource by the requesting device;

granting the resource to the requesting device based on the examination of the first, second and third factors.

14. The article of manufacture of claim 13, wherein the resource comprises a communications channel in the circuit switched network.

15. The article of manufacture of claim 13, wherein the communications channel in the circuit switched network comprises a radio frequency communications channel in the circuit switched network.

16. The article of manufacture of claim 13, wherein receiving a request for a resource from a device coupled to the circuit switched data network, comprises receiving a request for a resource from a device coupled to the circuit switched data network when a threshold for requesting the resource has been achieved.

17. The article of manufacture of claim 16, wherein the threshold comprises a depth of a data transmission queue for the device.

18. The article of manufacture of claim 17, wherein the depth of the data transmission queue for the device comprises a moving average of the depth of the data transmission queue for the device.

19. The article of manufacture of claim 16, wherein the threshold comprises a rate of change in a depth of a data transmission queue for the device.

20. The article of manufacture of claim 19, wherein the threshold comprises a moving average of the rate of change in the depth of the data transmission queue for the device.

21. The article of manufacture of claim 16, wherein the threshold comprises a time of utilization of the resource by the device.

22. The article of manufacture of claim 21, wherein the threshold comprises a moving average of the time of utilization of the resource by the device.

23. The article of manufacture of claim 1, wherein receiving a request for a resource from a device coupled to the circuit switched data network when a threshold for requesting the resource has been achieved, comprises adjusting the threshold for requesting the resource based on a number of resources already allocated to the device, and receiving the request for the resource from the device coupled to the circuit switched data network when the threshold for requesting the resource has been achieved.

24. A method for allocating a communications channel in a circuit switched data network, comprising:

receiving a request at a communications device coupled to the circuit switched data network to allocate the communications channel to transmit data to a remote communications device capable of being coupled to the circuit switched data network;

granting the request if the communications channel is available, otherwise:

examining a first factor corresponding to an instantaneous quantity of data to be transmitted to the remote communications device;

examining a second factor corresponding to a rate of change in the instantaneous quantity of data to be transmitted to the remote communications device;

examining a third factor corresponding to a time of utilization of the communications channel by the remote communications device;

allocating the communications channel between the communications device and the remote communications device based on the examination of the first, second and third factors.

25. The method of claim 24, wherein the communications channel in the circuit switched network comprises a radio frequency communications channel in the circuit switched network.

26. The method of claim 24, wherein receiving a request at a communications device coupled to the circuit switched data network to allocate the communications channel to transmit data to a remote communications device capable of being coupled to the circuit switched data network, comprises receiving a request at a communications device coupled to the circuit switched data network to allocate the communications channel to

transmit data to a remote communications device capable of being coupled to the circuit switched data network when a threshold for requesting allocation of the communications channel has been achieved.

27. The method of claim 26, wherein the threshold comprises a depth of a data transmission queue for the remote communications device.

28. The method of claim 27, wherein the depth of the data transmission queue for the remote communications device comprises a moving average of the depth of the data transmission queue for the remote communications device.

29. The method of claim 26, wherein the threshold comprises a rate of change in a depth of a data transmission queue for the remote communications device.

30. An article of manufacture, comprising:

a machine accessible medium, the machine accessible medium providing instructions, that when executed by a machine, cause the machine to allocate a communications channel in a circuit switched data network, comprising:

receiving a request at a communications device coupled to the circuit switched data network to allocate the communications channel to transmit data to a remote communications device capable of being coupled to the circuit switched data network;

granting the request if the communications channel is available, otherwise:

examining a first factor corresponding to an instantaneous quantity of data to be transmitted to the remote communications device;

examining a second factor corresponding to a rate of change in the instantaneous quantity of data to be transmitted to the remote communications device;

examining a third factor corresponding to a time of utilization of the communications channel by the remote communications device;

allocating the communications channel between the communications device and the remote communications device based on the examination of the first, second and third factors.

31. The article of manufacture of claim 30, wherein receiving a request at a communications device coupled to the circuit switched data network to allocate the communications channel to transmit data to a remote communications device capable of being coupled to the circuit switched data network, comprises receiving a request at a communications device coupled to the circuit switched data network to allocate the communications channel to transmit data to a remote communications device capable of being coupled to the circuit switched data network when a threshold for requesting allocation of the communications channel has been achieved.